

Major Causes of Urban Runoff Pollution

What day-to-day activities cause urban runoff pollution? Here are some of the biggest causes:

- **Using automobiles.** Particles in auto exhaust contain toxic organics and heavy metals. Dripping motor oil and wear from brake linings and tires deposit pollutants on streets and highways.
- **Maintaining vehicles.** Vehicle maintenance results in drips and spills of oil, coolant and other fluids. When performed outdoors, these fluids soak into asphalt and concrete pavements until they are washed away with the next storm. Water from washing vehicles outdoors carries pollutants directly to the nearest storm drain.
- **Allowing drainage from the shop floor to flow outside.** Allowing process or clean-up water to drain out onto the street is an often-seen practice that transports pollutants to the storm drain.
- **Cleaning tools or equipment outdoors.** Cleaning or rinsing containers, tools, floor mats or other items outdoors discharges pollutants such as chemicals, detergents, oils, etc.
- **Dumping wastes.** People looking for a "shortcut" to dispose of used oil, paint or other wastes dump them directly into storm drain inlets, causing pollution.
- **Landscaping and grounds maintenance.** Overuse, or indiscriminate use, of fertilizers and pesticides results in these materials running off landscaped areas into storm drains.
- **Allowing dumpster areas to become untidy.** Liquids that leak from dumpsters or garbage left outside the dumpster get washed away during a storm.
- **Building or remodeling facilities.** Disturbing soil and vegetation during construction greatly increases erosion; *sediment* is a pollutant. Lack of proper erosion controls and building material/waste handling practices during construction activities impacts runoff quality.



Effects of urban runoff pollution

What are the consequences of these activities? The most immediate effects can be seen: many creeks have an oily sheen near storm drain outfalls, litter is left behind by receding waters after a storm, layers of oil-and-grease-laden sediments accumulate, and dead animals are occasionally found on beaches.

But the most serious effects are more subtle. Some toxic substances affect critical life stages of certain organisms. Even if we do not usually see, or think about, these organisms (such as algae or mussels) they are part of the food supply for other plants and animals, including fish and birds. Pollutants in the aquatic environment disrupt the food chain. Some toxins bioaccumulate, which means organisms further up the food chain will concentrate the toxins in their tissue. This is why the State Health Department has recommended restrictions on human consumption of some species of fish and birds found in the Bay. Other effects of urban runoff pollution include contamination of water supply sources and loss of recreational activities such as fishing, swimming, and boating.

People can still stop stormwater pollution because people cause it. By making small changes in the way we live and work, we can reduce the pollution we produce. If you have additional questions concerning urban runoff, call the City of Alameda stormwater representative at (510) 749-5840 or the Alameda Countywide Clean Water Program (ACCWP) at (510) 670-5543.